Washington State
Department of Transportation

I-5 Express Toll Lanes Study
Phone Survey Report

PRR
VISION + VOICE

September 29, 2010

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Key Findings

A quarter of survey respondents are supportive of WSDOT's plan of operating up to two express toll lanes in each direction on I-5

- A quarter (24.5%) were supportive (rated '8' or above on a 10-point support scale with 0 being very low support and 10 being very high support) of WSDOT's plan to operate up to two express toll lanes (ETLs) in each direction in addition to existing general purpose lanes (GPLs) on I-5. Thirteen percent rated their support a '10', very supportive.

- On the other hand, over two-fifths (43.1%) did not support the plan (rating of '2' or below on a 0 to 10 scale), with 30% indicating very low support (rating of '0' on a 0 to 10 scale).

Many find the benefit statements about express toll lanes to be appealing

At least two-fifths and above rated the benefit statements about ETLs to be appealing on a scale of 1 to 7 (where 1 was not appealing at all and 7 was very appealing):

- Over three-fifths (63.9%) found the statement 'Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths.' to be appealing (rated it a '5' or more on a 7-point scale). Over two-fifths (41.6%) found it to be 'very appealing'.

- Close to three-fifths (58.6%) found the statement 'Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor' to be appealing. Over a third (34.1%) found it to be 'very appealing'.

- Over half (52.4%) found the statement 'Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment' to be appealing. Over a quarter (28.8%) found it to be 'very appealing'.

- Close to half (48.3%) found the statement 'Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes' to be appealing. Over a fifth (22.8%) found it to be 'very appealing'.

- Close to half (48.1%) found the statement 'Toll rates will change by the amount of traffic congestion – higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion.' to be appealing . Close to a fifth (19.1%) found it to be 'very appealing'.

- Close to half (47.4%) found the statement 'Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes' to be appealing. Over a fifth (21.5%) found it to be 'very appealing'.

- Over two-fifths (42.1%) found the statement 'Changing from HOV to express toll lanes will make transit faster and more reliable' to be appealing. Close to a fifth (17%) found it to be 'very appealing'.

Many support converting reversible express lanes to express toll lanes

- Over half (51.2%) were supportive (rated '5' or above on a 7-point scale with 0 being strongly oppose and 7 being strongly support) of converting the I-5 reversible express lanes into ETLs if doing so would move more people and vehicles through the corridor. 24.8% 'strongly' supported this.

- Close to a half (48.9%) were supportive of converting the I-5 reversible express lanes into ETLs if doing so would allow you to use any of the downtown exits. 27.6% 'strongly' supported this.

- Over two-fifths (43.1%) were supportive of converting the I-5 reversible express lanes into ETLs if doing so would improve speeds and reduce backups on the lanes through downtown. 21.5% 'strongly' supported this.

A third would have used express toll lanes for faster trip

Close to a third (31.8%) indicated that they would have been likely (rated '7' or above on a 10-point support scale) to have used ETLs for a faster trip during their previous travel on I-5 when it was congested. Fifteen percent reported that they would have been 'very likely' to have used the lanes for a faster trip.

Half would use express toll lanes at least one time per month

A half (50.4%) said that they saw themselves using the ETLs at least one time per month. While 2.7% were undecided, the remaining 46.9% said that they wouldn't use the ETLs at least once per month.

'Congestion during peak hours' is the top circumstance under which people will use express toll lanes

The top five circumstances under which respondents could see themselves using the ETLs included:

- congested traffic during peak hours (23.2%)
- in a hurry (15.4%)
- during emergency (14.9%)
- keeping an appointment (14%)
- while running late (13%)

Respondents want express toll lanes to deliver less traffic and greater travel speeds

The top things that respondents would want ETLs on I-5 to accomplish included:

- less traffic (39.4%)
- greater speed (29.1%)
- keep traffic flowing (24.8%)

Over half are willing to pay up to $2.00 to use express toll lanes

Over half (56%) said that they were willing to pay up to $2 to travel in the ETLs if it would increase their speed to 45 miles per hour. Over a quarter (26.8%) were unwilling to pay a toll to increase their speed to 45 mile per hour.

Many do not support changing the definition of high occupancy vehicle to 3 or more people

Close to two-thirds (64.6%) said that they did not support changing the definition of a high occupancy vehicle from 2 or more people to 3 or more people. While 2.2% remained undecided, the remaining 33.3% were supportive of changing the current definition of a high occupancy vehicle to 3 or more people.

Many have seen the smarter highways signs on I-5 south of downtown Seattle, and half think these improve traffic flow and safety

- Three-fifths (60.1%) reported that they had seen the new smarter highways signs in action over each lane on I-5 south of downtown Seattle. While 1.7% were did not know if they had seen these signs in action, the remaining 38.3% said that they had not seen the signs in action.
- Of those who had seen these signs in action, half (50.4%) thought that these signs would improve traffic flow and safety. Another 13.9% said that they did not know if these signs would traffic flow and safety. The remaining 35.7% reported that these signs did not improve traffic flow and safety.

There exist gradations of support for express toll lanes

A cluster analysis was performed to identify market segments relative to support for ETLs. Three clusters were identified:

- Cluster #1- low fans (32.1%)
- Cluster #2- medium fans (31.1%)
- Cluster #3- big fans (36.8%)

Predicting support for express toll lanes on I-5

It was found that one's support for ETLs on I-5 increased:

- By 3.741 times if they saw themselves using ETLs at least once per month.
- By 1.419 times for each increase in the level of appeal for the statement "Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths".
- By 1.332 times for each increase in the level of appeal for the statement "Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes".
- By 1.378 times for each increase in the level of support one had for converting the I-5 reversible express lanes into ETLs if doing so would meant improving speeds and reducing backups on the lanes through downtown.

Introduction and Methodology

Background and Objectives

The Washington State Department of Transportation (WSDOT) is working on a grant from the Federal Highways Administration to address perceptions about converting HOV lanes into express toll lanes (ETLs), and to develop and test messaging for communication efforts regarding ETLs.

As a part of this endeavor, WSDOT collaborated with PRR to conduct a telephone survey between August 27th and September 4th, 2010 in order to obtain the opinions of I-5 users regarding the ETL concept and the issue of tolling for traffic management purposes. The survey also aimed at identifying the barriers and motivators for ETLs on I-5. The current report presents a comprehensive summary of the findings from this telephone survey.

Survey Methodology

Survey Development

PRR, in collaboration with WSDOT, developed questions for the phone survey. This process involved several initial drafts of survey questions. All drafts were reviewed by WSDOT team members and a final draft of the phone survey questions was achieved (see Appendix A).

The phone survey questions were programmed into Computer Assisted Telephone Interviewing software. Survey questions were then pre-tested and monitored on the first night of the survey fielding. The pre-testing indicated that the survey questions were working well and no changes in wording to the questions were made as a result of the pretest. The pretest surveys were included in the final sample.

Survey Fielding

The following steps outline the process followed in fielding the survey:

- Used random digit dial telephone numbers for the following zip codes along the I-5 corridor for the sampling frame: 98001, 98003, 98004, 98011, 98012, 98020, 98023, 98026, 98028, 98032, 98033, 98034, 98036, 98037, 98039, 98040, 98043, 98055, 98056, 98101, 98102, 98103, 98104, 98105, 98106, 98107, 98108, 98109, 98112, 98115, 98116, 98117, 98118, 98119, 98121, 98122, 98125, 98126, 98133, 98134, 98136, 98144, 98146, 98148, 98155, 98158, 98166, 98168, 98177, 98178, 98188, 98195, 98198, 98199, 98203, 98204, 98208, 98275, 98296, 98422 .
- Fielded the survey to a random sample of 601 I-5 users (300 who primarily use I-5 north of Seattle and 301 who primarily use I-5 south of Seattle) who traveled on I-5 at least once during the previous week.
- To reduce sample bias, a minimum of four attempts were made to establish contact at different times of the day and days of the week with every randomly selected phone number.

The overall margin of error for all 601 completed surveys is +/- 4% at the 95% confidence interval. The **margin of error** is the plus-or-minus percent figure that applies to the interval that if you had asked the question of the entire relevant population would have picked the answer chosen by the sample. The **confidence level** tells you how sure you can be. It is expressed as a percentage and represents how often the true percentage of the population who would pick an answer lies within the margin of error. The response rate[1] for the survey was 11.7% and the cooperation rate[2] was 51.5%.

Data Processing and Analysis

Data processing consisted of coding and entering quantitative and qualitative responses. Response range and logic checks were performed in order to check for miscoded variables thereby cleaning the final data file. Data analysis was conducted with SPSS (Statistical Package for the Social Sciences) software.

1 Using the approved American Association of Public Opinion Research approach, response rate is defined as the number of completed surveys plus partial or suspended surveys divided by the number of completed surveys, plus partial or suspended surveys, plus qualified refusals, plus break-offs, plus no answer, plus busy signal, plus answering machine, plus soft refusals, plus hard refusals, plus scheduled callbacks, plus unspecified callbacks.

2 Cooperation rate is defined as the number of completed surveys divided by the number of completed surveys plus refusals plus break-offs.

Data analysis involved the use of appropriate descriptive statistical techniques (frequencies, percentages and means) and explanatory statistical techniques (in this case Cramer's V and Kendall's Tau c) to test for the statistical significance of relationships between variables[3]. Finally, logistical regression and cluster analysis were performed to identify significant predictors and market segments relative to respondents' support for ETLs. Throughout this report, relationships between variables that are statistically significant at the .05 level or better, and that are meaningful to an understanding of the data are reported.

It should also be noted that some of the charts and tables presented in the report are for "multiple response variables", meaning that the survey respondent could select more than one answer. In such charts and tables the percentages will add up to more than 100 percent.

3 Cramer's V is a measure of the relationship between two variables and is appropriate to use when one or both of the variables are at the nominal level of measurement. Cramer's V ranges from 0 to +1 and indicates the strength of a relationship. The closer to +1, the stronger the relationship between the two variables. Kendall's Tau c is a measure of the relationship between two variables and is appropriate to use when both of the variables are at the ordinal level of measurement. Tau c ranges from -1 to +1 and indicates the strength and direction of a relationship. The accompanying "p" scores presented in this report for Cramer's V and Tau c indicate the level of statistical significance.

Sample Profile

	Sample
Gender	**(n = 601)**
Female	50.4
Male	49.6
Age	**(n = 601)**
18 – 24	3.7
25 – 34	6.2
35 – 44	20.5
45 – 54	24.8
55 - 64	25.0
65 or older	18.3
Refused	1.7
Household Income before taxes	**(n = 601)**
Under $20,000	3.8
$20,000 - $29,999	6.2
$30,000 - $54,999	16.5
$55,000 - $74,999	13.5
$75,000 - $89,999	12.1
$90,000 - $124,999	15.6
$125,000 - $149,999	6.2
$150,000 and above	12.5
Refused	13.3
Ethnic background	**(n = 601)**
White / Caucasian (not Hispanic / Latino background)	76.9
White / Caucasian (Hispanic / Latino background)	1.8
Black / African American	3.2
Asian / Pacific Islander	6.3
Hispanic / Latino	2.2
Native American	1.0
Multi-racial	3.2
Other	1.0
Refused	4.5

	Sample
Work Situation*	**(n = 601)**
Employed full-time	56.6
Employed part-time	14.1
Student full-time	3.7
Student part-time	2.8
Homemaker	7.0
Retired	20.5
Unemployed	6.2
Refused	0.8
*Multiple responses allowed; Percent add up to more than 100%	
Do you have a Good To Go!™ transponder account?	**(n = 601)**
No	94.7
Yes	5.3

I-5 Usage Patterns

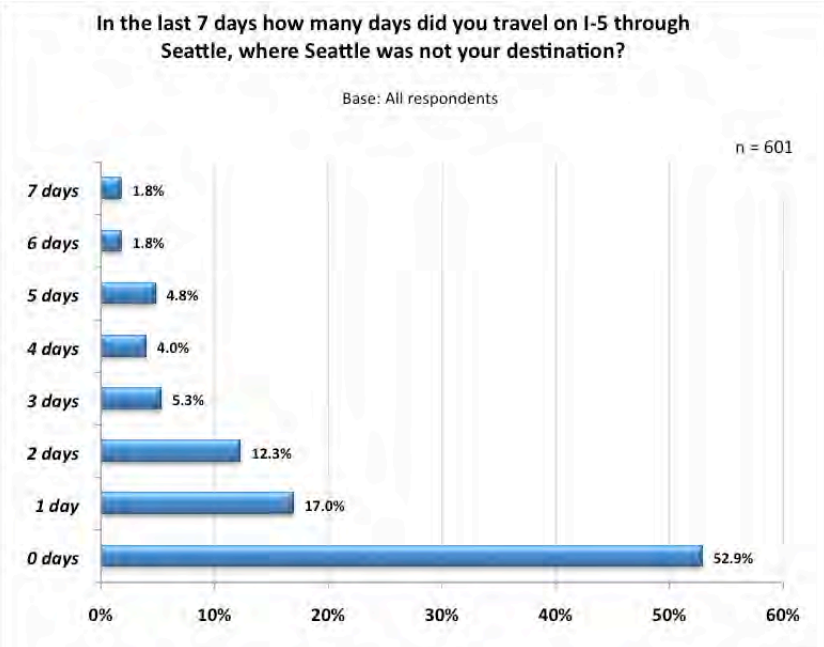
Survey respondents were asked to indicate:

- the number of days they had traveled on I-5 through Seattle (where Seattle was not their destination) in the last 7 days
- the number of days they had used the reversible express lanes and the HOV lanes on I-5 in the last 7 days
- whether they traveled during the weekdays and/or weekends
- the time of their travel on these trips
- the modes of transportation they used to travel on I-5
- trip purposes for using I-5 in the last 7 days
- the level of congestion when they traveled in HOV lanes, regular general purpose lanes (GPLs) and reversible express lanes on I-5

Close to half use I-5 through Seattle, but not to Seattle at least once a week

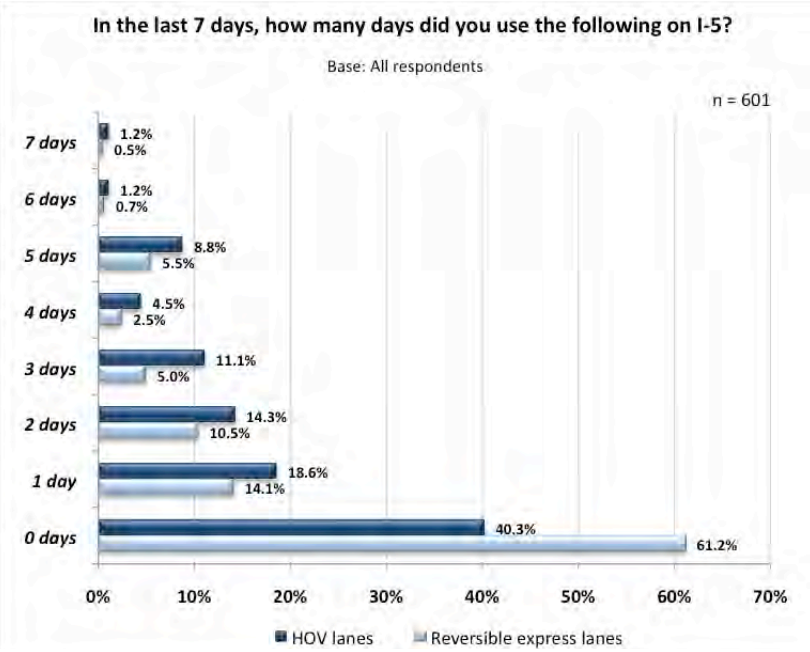
Close to half (47.%) of respondents reported using I-5 through Seattle(where Seattle was not their destination) at least once in the last 7 days, with over a tenth (12.4%) using it four or more times in this way in the previous week. It was also found that non-whites (62.4%) were more likely to report using I-5 through Seattle at least once in the previous week as compared to whites (43.8%).[4]

4 Cramer's V = .185; p = .007



More use HOV lanes as compared to reversible express lanes on I-5

Three-fifths (59.7%) reported using HOV lanes on I-5 at least once in the last 7 days, with almost a fifth (15.7%) using them four or more times in the previous week. In comparison, close to two-fifths (38.8%) reported using the reversible express lanes on I-5 at least once in the last 7 days, with almost a tenth (9.2%) using them four or more times in the previous week.



It was also found that men (45.3%) were more likely to report using the reversible express lanes on I-5 at least once in the last 7 days as compared to women (32.3%).[5]

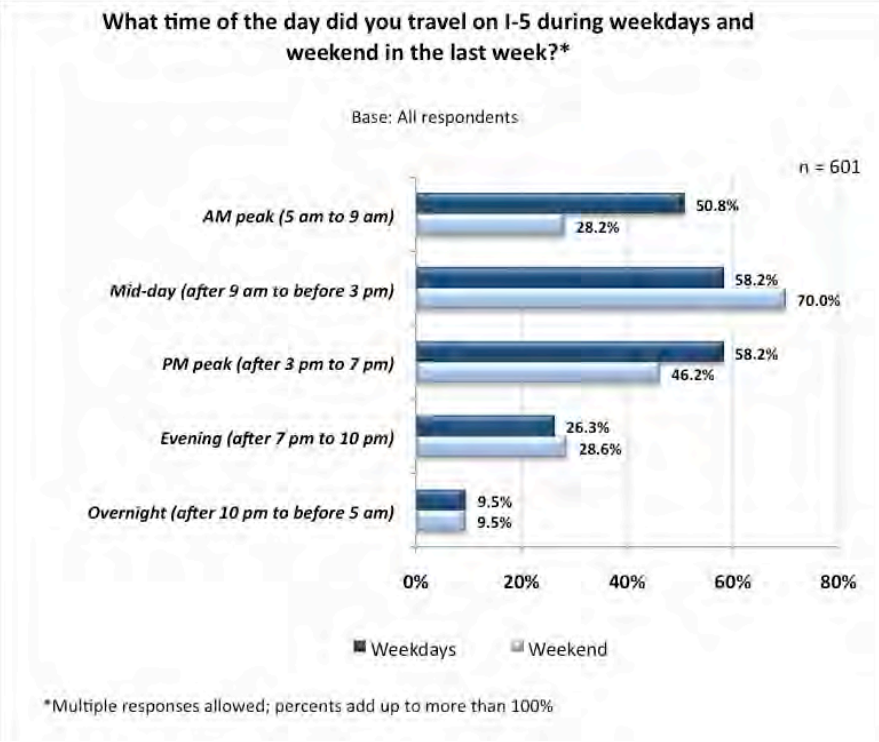
Many travel I-5 during weekdays as well as weekends

Two-thirds (66.4%) said they traveled on I-5 during the weekdays as well as weekend days. Less than a tenth (5.7%) said that they used it only during the weekends. The remaining 28% said that they used I-5 only during the weekdays.

Further, of those who traveled on I-5 during weekdays, almost three-fifths (58.2%) reported traveling during the PM peak hours (3 pm to 7 pm), and another three-fifths (58.2%) said they traveled during mid-day (after 9 am to before 3 pm). Over a half (50.8%) reported that they traveled during the AM peak hours (5 am to 9 am).

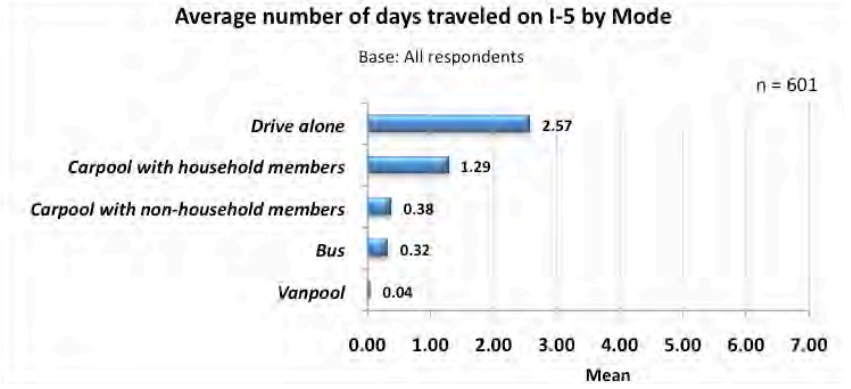
As for traveling on I-5 during weekend in previous last week, 70% reported traveling during mid-day, and close to half (46.2%) said they traveled during the PM peak hours. Over a quarter reported that they traveled during evening (after 7 pm to 10 pm; 28.6%) and during AM peak hours (28.2%).

5 Cramer's V = .171; p = .014



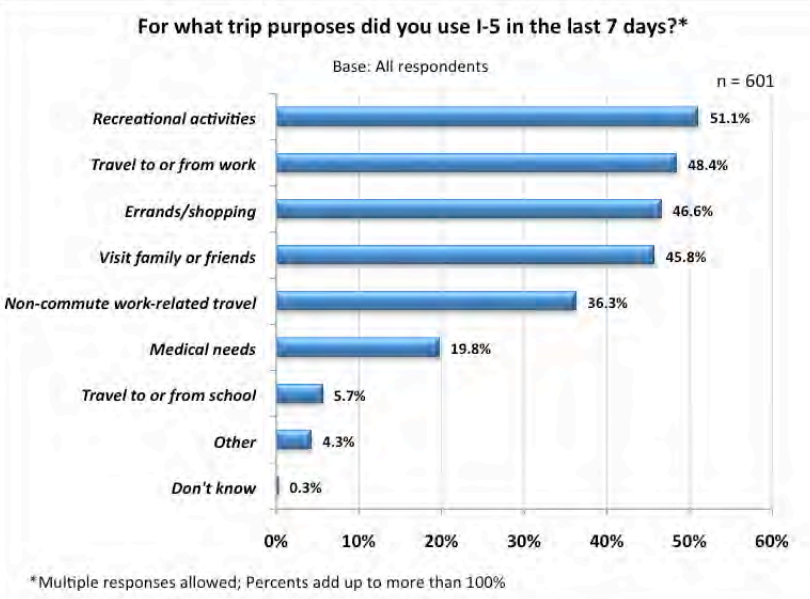
Driving alone is the most frequent mode of transportation on I-5

The top two modes of transportation that respondents used in the last 7 days to travel on I-5 included driving alone (mean = 2.57 days) and carpooling with household members (mean = 1.29 days).



Recreation is the top reason to travel on I-5

The top four trip purposes for using I-5 included recreational activities (51.1%), commuting to or from work (48.4%), running errands (46.6%), and visiting family and friends (45.8%).

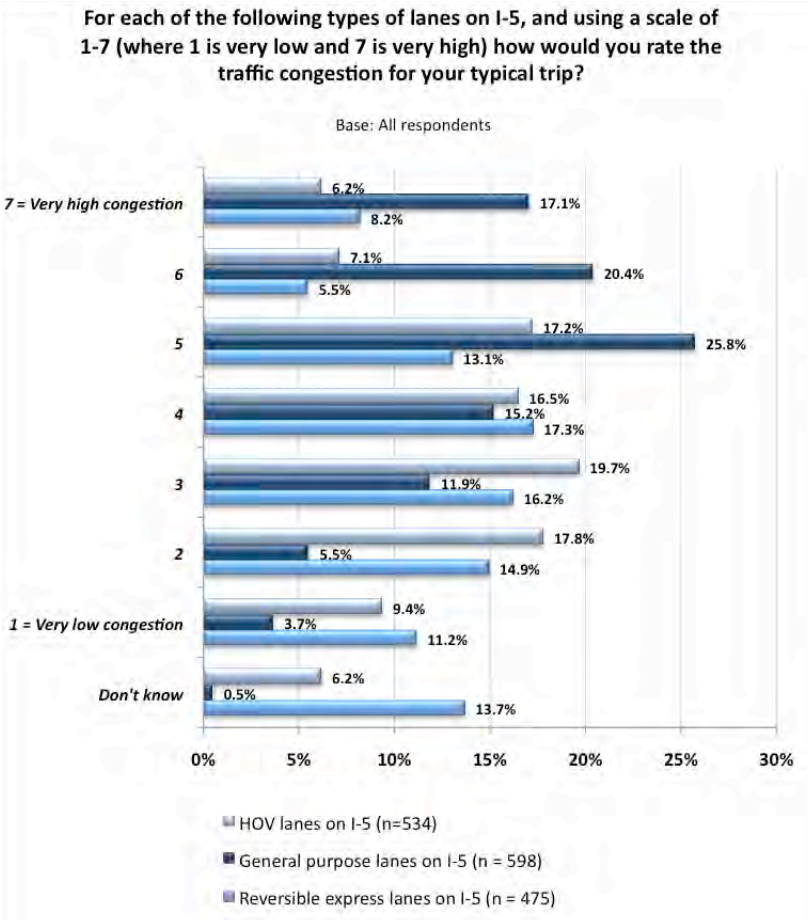


More find regular general purpose lanes on I-5 to be congested as compared to reversible express lanes and HOV lanes

Respondents were asked to rate the traffic congestion for their typical trip on HOV lanes, GPLs, and reversible express lanes on I-5. It was found (on a scale of 1 to 7 where 1 was very low congestion and 7 was very high congestion) that:

- HOV lanes:
    - Close to a third (30.5%) of all respondents reported that traffic was congested (rated '5' or above on the 7-point scale) on HOV lanes on I-5. Less than a tenth (6.2%) rated it a '7', very high congestion.
    - Of those who used the HOV lanes at least once in the last 7 days, a third (33%) reported that traffic was congested on HOV lanes on I-5 on HOV lanes on I-5, with less than a tenth (6%) indicating 'very high' congestion.

- Regular GPLs:
  - Over three-fifths (63.3%) of all respondents reported that traffic was congested on regular GPLs on I-5. Close to a fifth (17.1%) rated it a '7', very high congestion.
- Reversible express lanes:
  - Over a quarter (26.8%) of all respondents reported that traffic was congested on reversible express lanes on I-5. Close to a tenth (8.2%) rated it a '7', very high congestion. Further, it was found that non-whites (12.7%) were more likely to report very high congestion on reversible express lanes on I-5 as compared to whites (8.5%).[6]
  - Of those who used the reversible lanes at least once in the last 7 days, over a quarter (28.8%) reported that traffic was congested on reversible express lanes on I-5, with less than a tenth (6.9%) indicating 'very high' congestion.



6 Cramer's V = .182; p = .041

Support for Express Toll Lanes

Are people supportive of express toll lanes on I-5?

Survey respondents were told:

"Express toll lanes are free for carpools and buses, and are also open to solo drivers who choose to pay a toll for a faster, more reliable trip when they need it most. These are separate from existing general purpose traffic lanes replacing existing HOV lanes. Toll rates for solo drivers adjust with the level of congestion to ensure that traffic in the express toll lane is free flowing (at least 45 miles per hour) even when the regular lanes are congested. With express toll lanes you always have the choice to stay in the un-tolled general purpose lanes."

They were then told that WSDOT was considering operating up to two ETLs in each direction on I-5, and that these lanes would be in addition to existing general purpose traffic lanes. Respondents were then asked to rate their level of support (on a 0 to 10 scale, with 0 being very low support and 10 being very high support) for this plan.

A quarter were supportive of WSDOT's plan of operating up to two express toll lanes in each direction on I-5

A quarter (24.5%) were supportive (rated '8' or above on a 0 to 10 scale with 0 being very low support and 10 being very high support) of WSDOT's plan to operate up to two ETLs in each direction on I-5. Thirteen percent rated their support a '10', very supportive. On the other hand, over two-fifths (43.1%) did not support the plan (rating of '2' or below on a 0 to 10 scale), with 30% indicating very low support (rating of '0' on a 0 to 10 scale).

How appealing are benefit statements about express toll lanes?

Survey respondents were asked to rate (on a scale of 1 to 7, where 1 was not appealing at all and 7 was very appealing) how appealing they found each of the following statements with regard to benefits of ETLs on I-5.

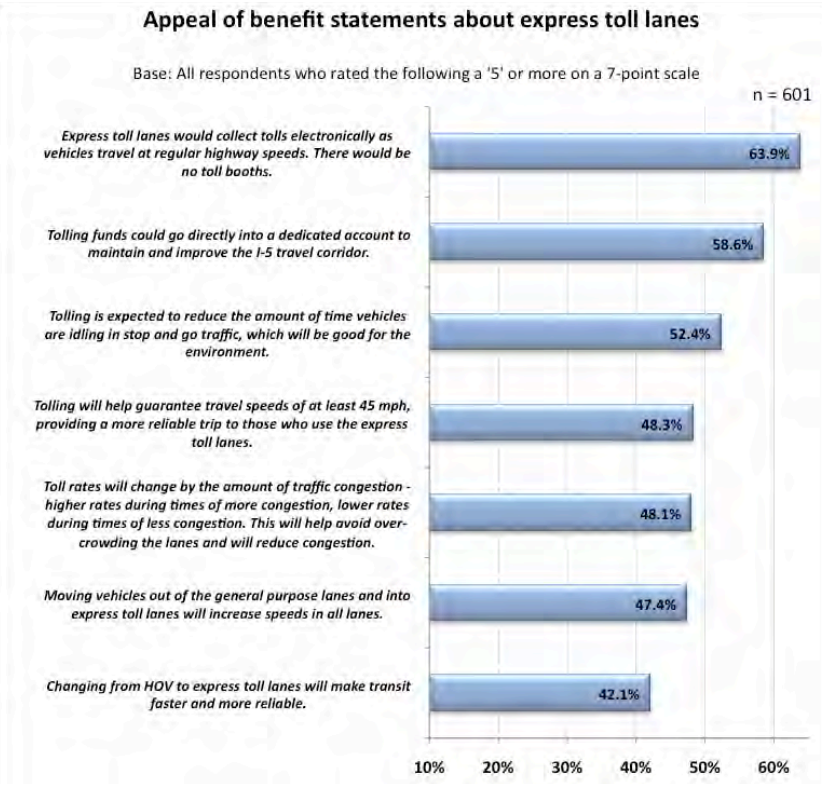
The benefit statement 'Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths' is the most appealing

- Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths.
    - Over three-fifths (63.9%) found this statement to be appealing (rated it a '5' or more on a 7-point scale). Over two-fifths (41.6%) found it to be 'very appealing'.
- Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor.
    - Close to three-fifths (58.6%) found this statement to be appealing. Over a third (34.1%) found it to be 'very appealing'.
- Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment.
    - Over half (52.4%) found this statement to be appealing. Over a quarter (28.8%) found it to be 'very appealing'.
- Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes.
    - Close to half (48.3%) found this statement to be appealing. Over a fifth (22.8%) found it to be 'very appealing'.
- Toll rates will change by the amount of traffic congestion – higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion.

- Close to half (48.1%) found this statement to be appealing. Close to a fifth (19.1%) found it to be 'very appealing'.

- Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes.
  - Close to half (47.4%) found this statement to be appealing. Over a fifth (21.5%) found it to be 'very appealing'.
  - Women (51.9%) found this statement to be more appealing as compared to men (43.8%).[7]

- Changing from HOV to express toll lanes will make transit faster and more reliable
  - Over two-fifths (42.1%) found this statement to be appealing. Close to a fifth (17%) found it to be 'very appealing'.
  - Women (47.3%) found this statement to be more appealing as compared to men (38.7%).[8]



7 Cramer's V = .152; p = .034

8 Cramer's V = .154; p = .030

Many supported converting reversible express lanes to express toll lanes

Respondents were asked to rate their support on a scale of 1 to 7 (where 1 was strongly opposed and 7 was strongly support) for converting the I-5 reversible express lanes into ETLs if doing so would:

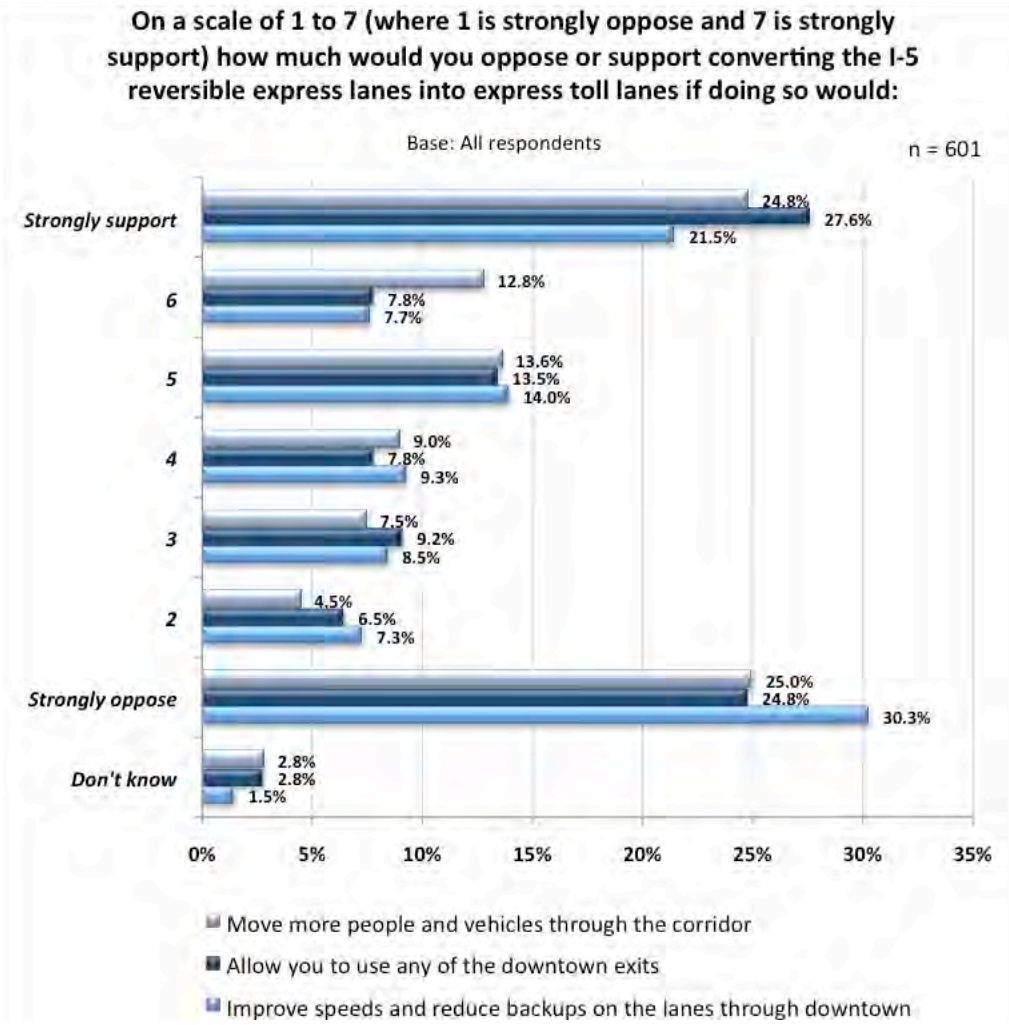
- Improve speeds and reduce backups on the lanes through downtown
- Allow you to use any of the downtown exits
- Move more people and vehicles through the corridor

It was found that over half (51.2%) were supportive (rated '5' or above on a 7-point scale with 0 being strongly oppose and 7 being strongly support) of converting the I-5 reversible express lanes into ETLs if doing so would move more people and vehicles through the corridor. A quarter (24.8%) 'strongly' supported this. In addition, more women (57.4%) were supportive of converting the reversible express lanes into ETLs for moving more people and vehicles through the corridor as compared to men (48.1%).[9]

In comparison, close to half (48.9%) were supportive of converting the I-5 reversible express lanes into ETLs if doing so would allow you to use any of the downtown exits from the main lanes on I-5. Over a quarter (27.6%) 'strongly' supported this.

Further, fewer (43.1%) were supportive of converting the I-5 reversible express lanes into ETLs if doing so would improve speeds and reduce backups on the lanes through downtown. Over a fifth (21.5%) 'strongly' supported this.

9 Cramer's V = .159; p = .021

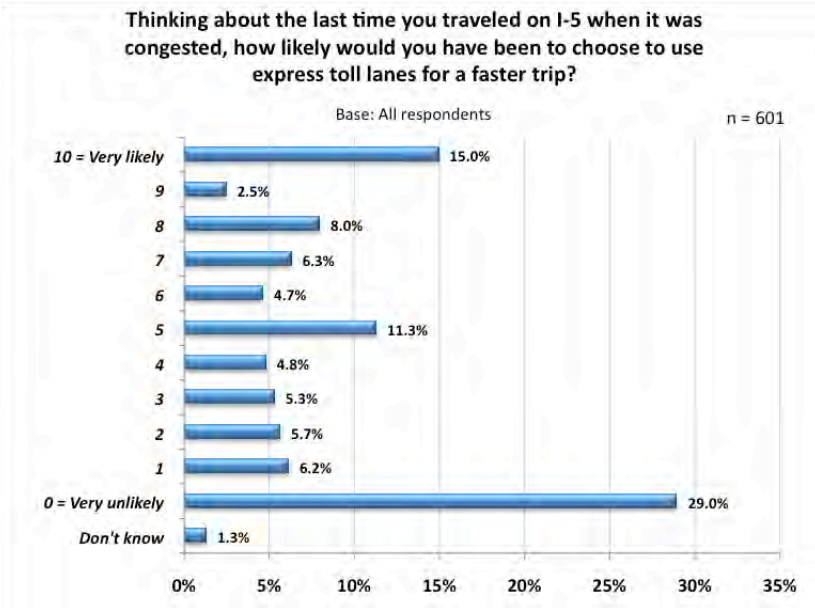


How likely are people to use express toll lanes for faster trip?

Survey respondents were asked to rate their likelihood (on a 0 to 10 scale, with 0 being very unlikely and 10 being very likely) to have used ETLs for a faster trip during their previous travel on I-5 when it was congested.

Close to a third would have used express toll lanes for faster trip

Close to a third (31.8%) indicated that they would have been likely (rated '7' or above on a 10-point support scale) to have used ETLs for a faster trip during their previous travel on I-5 when it was congested. Fifteen percent reporting that they would have been very likely (rating of '10' on a 0 to 10 scale) to have used the lanes for a faster trip.



It was also found that the higher the degree of congestion one reported during ones' typical trip on the reversible express lanes on I-5, the more likely they were to report they would have used ETLs for a faster trip on I-5.[10]

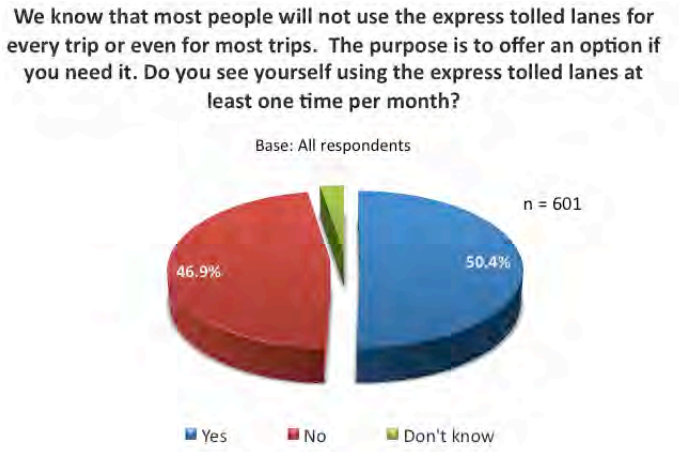
How many days a month and under what circumstances are people likely to use express toll lanes?

Respondents were asked if they saw themselves using the ETLs at least once per month, under what circumstances they saw themselves using the ETLs, what were the top two things they would want ETLs on I-5 to accomplish, and how much they were willing to pay to travel in ETL on I-5.

10 Kendall's tau-c = .096; p = .016

Half would use express toll lanes at least one time per month

A half (50.4%) said that they saw themselves using the ETLs at least one time per month. While 2.7% were undecided, the remaining 46.9% said that they wouldn't use the ETLs at least once per month.



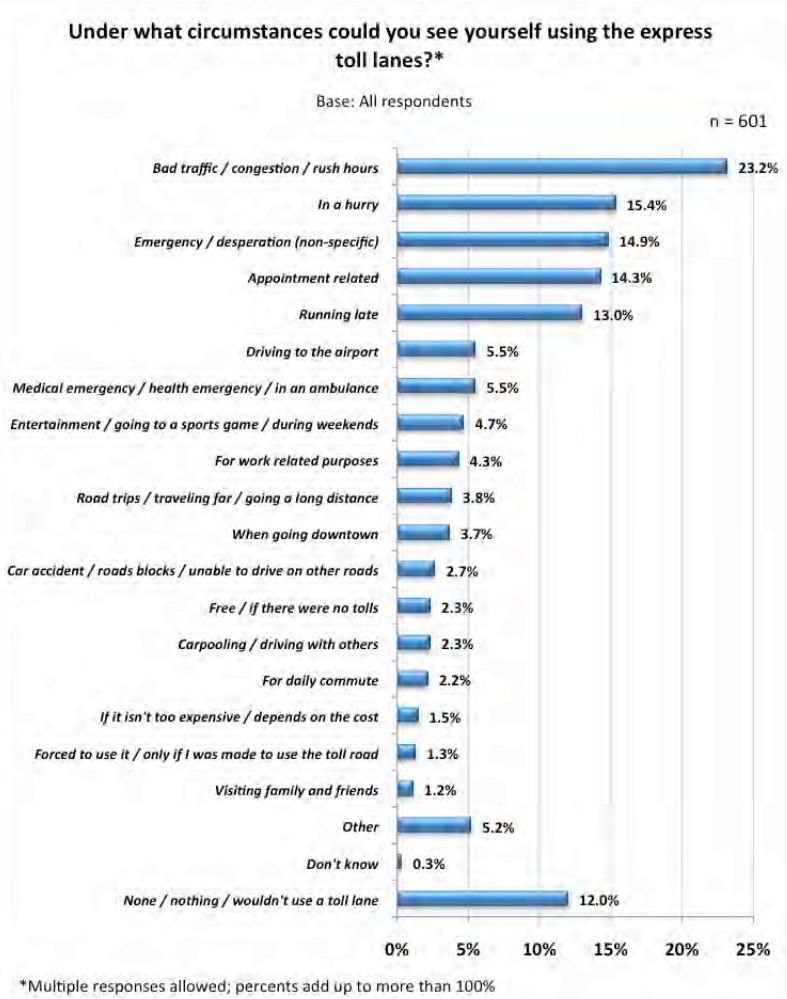
In addition, it was found that the younger one was, the more likely they were to report that they saw themselves using the ETLs at least one time per month.[11]

'Congestion during peak hours' is the top circumstance under which people will use express toll lanes

When asked about the circumstances under which they would use ETLs, the respondents mentioned the following (top five):

- congested traffic during peak hours (23.2%)
- in a hurry (15.4%)
- during emergency (14.9%)
- keeping an appointment (14%)
- while running late (13%)

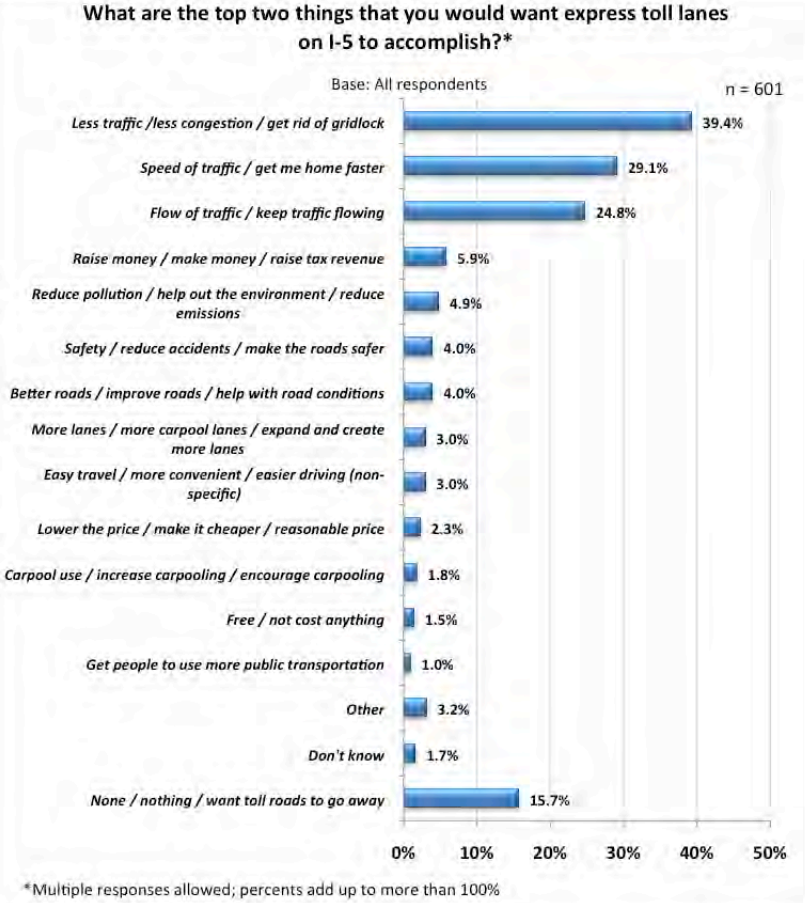
11 Kendall's tau-c = .096; p = .016



Respondents want express toll lanes to deliver less traffic and greater travel speeds

The top things that respondents mentioned with regard to what they would want ETLs on I-5 to accomplish included:

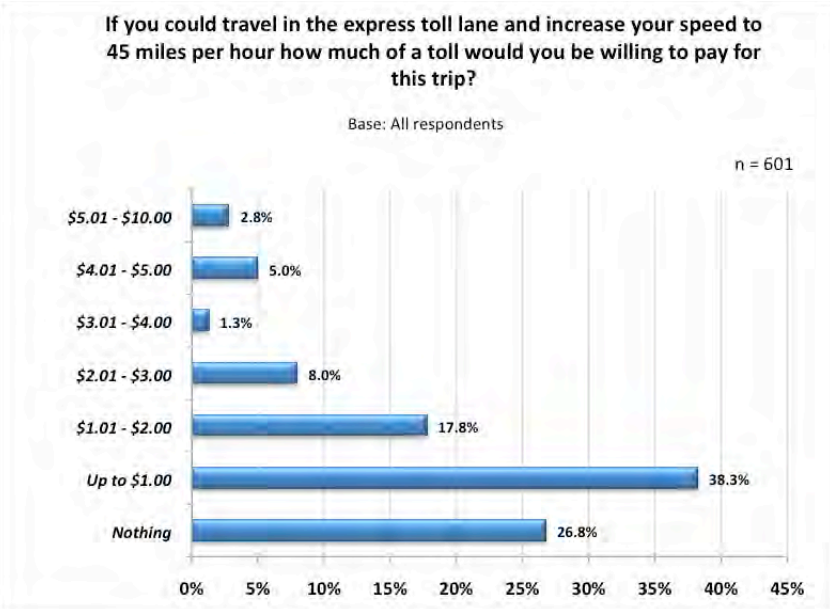
- less traffic (39.4%)
- greater speed (29.1%)
- keep traffic flowing (24.8%)



Over half are willing to pay up to $2.00 to use express toll lanes

Respondents were asked to imagine that they were traveling alone in the general purpose lanes on I-5 and that traffic is stop-and-go. They were asked that if they could travel in the ETL and increase their speed to 45 miles per hour how much of a toll were they willing to pay for such a trip.

Over half (56%) said that they were willing to pay up to $2.00 to travel in the ETLs if it would increase their speed to 45 miles per hour. Over a quarter (26.8%) was not willing to pay a toll for such a trip.



In addition, it was found that non-whites (69.3%) were more willing to pay up to $2.00 to travel in the ETLs if it would increase their speed to 45 miles per hour as compared to whites (53.4%).[12] Also, the older one was, the less willing they were to pay a toll to travel in ETLs.[13]

Do people support changing definition of high occupancy vehicle from 2 or more people to 3 or more people?

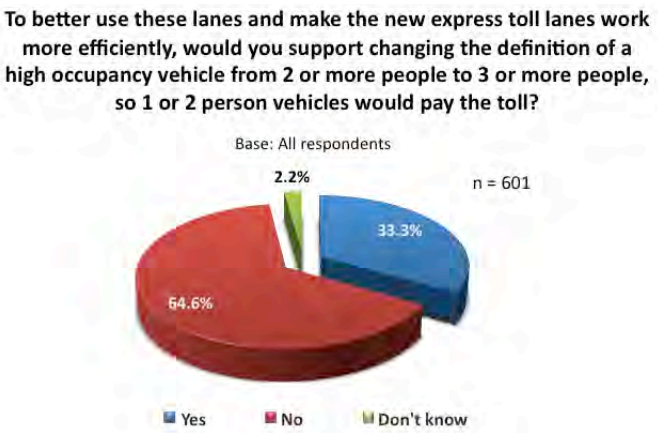
Survey respondents were told that vehicles with 2 or more people could currently use the I-5 HOV lanes. However, HOV lanes on I-5 were currently over-used during peak commute times, slowing all vehicles in the lanes, including buses and carpools. They were then asked if they would support changing the definition of a high occupancy vehicle from 2 or more people to 3 or more people, so 1 or 2 person vehicles would pay the toll in order to better use these lanes and make the ETLs work more efficiently.

Most do not support changing the definition of high occupancy vehicle to '3 or more people'

Close to two-thirds (64.6%) said that they did not support changing the definition of a high occupancy vehicle from 2 or more people to 3 or more people. While 2.2% remained undecided, the remaining 33.3% were supportive of changing the current definition of a high occupancy vehicle to 3 or more people.

12 Cramer's V = .156; p = .030

13 Kendall's tau-c = -.108; p = .000



What do people think of the smarter highways signs on I-5?

Survey respondents were asked if they had seen the new smarter highways signs in action over each lane on I-5 south of downtown Seattle, and if these signs improve traffic flow and safety. It should be noted that the signs had only been active for about two and a half weeks prior to the fielding of the survey.

Many have seen the smarter highways signs on I-5 south of downtown Seattle, and half think these improve traffic flow and safety

Three-fifths (60.1%) reported that they had seen the new smarter highways signs in action over each lane on I-5 south of downtown Seattle. While 1.7% were did not know if they had seen these signs in action, the remaining 38.3% said that they had not seen the signs in action. It was also found that the more frequently one had used the reversible express lanes on I-5 during the previous week, the more likely one was to have seen these signs in action.[14]

14 Kendall's tau-c = .101; p = .011

Further, of those who had seen these signs in action, half (50.4%) thought that these signs would improve traffic flow and safety. Another 13.9% said that they did not know if these signs would traffic flow and safety. The remaining 35.7% reported that these signs did not improve traffic flow and safety.

It was also found that of those who had seen the smarter highways signs in action:

- The lower the degree of congestion one reported on regular GPLs during their typical trip, the more likely they were to think that the new smart highway signs would improve traffic flow and safety. [15]
- The more they thought the new smarter highways signs would improve traffic flow and safety:
  - The greater their support for WSDOT's plan for operating up to two ETLs in each direction on I-5.[16]
  - The more appealing they found the statement "Toll rates will change by the amount of traffic congestion - higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion".[17]
  - The more appealing they found the statement "Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment".[18]
  - The more appealing they found the statement "Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes".[19]

15 Kendall's tau-c = -.211; p = .001

16 Kendall's tau-c = .151; p = .018

17 Kendall's tau-c = .197; p = .002

18 Kendall's tau-c = .165; p = .009

19 Kendall's tau-c = .155; p = .015

- The more appealing they found the statement "Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor".[20]
- The more appealing they found the statement "Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds".[21]
- The more appealing they found the statement "Changing from HOV to express toll lanes will make transit faster and more reliable".[22]
- The more supportive they were of converting the I-5 reversible express lanes into ETLs if doing so would improve speeds and reduce backups on the lanes through downtown.[23]
- The more supportive they were of converting the I-5 reversible express lanes into ETLs if doing so would allow for using any of the downtown exits.[24]
- The more supportive they were of converting the I-5 reversible express lanes into ETLs if doing so would allow for using any of the downtown exits.[25]
- The more they were willing to pay to travel in ETL to increase their speed up to 45 mph.[26]
- The more supportive they were of changing the definition of a high occupancy vehicle from 2 or more people to 3 or more people.[27]

20 Kendall's tau-c = .198; p = .001

21 Kendall's tau-c = .127; p = .042

22 Kendall's tau-c = .197; p = .002

23 Kendall's tau-c = .216; p = .001

24 Kendall's tau-c = .219; p = .001

25 Kendall's tau-c = .192; p = .002

26 Kendall's tau-c = .129; p = .035

27 Kendall's tau-c = .107; p = .036

Are there market segments that are more supportive of express toll lanes on I-5?

A cluster analysis was performed to identify market segments relative to support for ETLs. Cluster analysis is an exploratory data analysis technique designed to reveal natural groupings within a collection of data. As such, cluster analysis can suggest potentially useful ways of identifying market segments. Three clusters were identified:

Cluster 1 – Low fans (32.1%; n = 193)	Cluster 2 – Medium fans (31.1%; n = 187)	Cluster 3 – Big fans (36.8%; n = 221)
• Show very little support (mean = 0.72 on a scale of 0 to 10 where 0 = very unlikely and 10 = very likely) for WSDOT's plan of operating up to two ETLs in each direction in addition to regular GPLs on I-5. • Strongly opposes converting the I-5 reversible express lanes into ETLs for improving speeds and reducing backups on the lanes through downtown. • Opposes converting the I-5 reversible express lanes into ETLs for allowing the use any of the downtown exits. • Opposes converting the I-5 reversible express lanes into ETLs for moving more people and vehicles through the corridor. • Very unlikely that they would have chosen to use ETLs for a faster trip the last time they traveled on I-5 when it was congested. • Did not see themselves using ETLs at least once per month. • Were least willing to pay up to $4.00 (33.6%) to travel in the ETLs and increase their speed to 45 mph, as compared to the other clusters.	• Show less support (mean = 3.16 on a scale of 0 to 10 where 0 = very unlikely and 10 = very likely)for WSDOT's plan of operating up to two ETLs in each direction in addition to regular GPLs on I-5. • Neither opposes nor supports converting the I-5 reversible express lanes into ETLs for improving speeds and reducing backups on the lanes through downtown. • Neither opposes nor supports converting the I-5 reversible express lanes into ETLs for allowing the use any of the downtown exits. • Somewhat supports converting the I-5 reversible express lanes into ETLs for moving more people and vehicles through the corridor. • Somewhat unlikely that they would have chosen to use ETLs for a faster trip the last time they traveled on I-5 when it was congested. • Did not see themselves using ETLs at least once per month. • Were more willing to pay up to $4.00 (78.6%) to travel in the ETLs and increase their speed to 45 mph than Cluster 1.	• Show high support (mean = 7.92 on a scale of 0 to 10 where 0 = very unlikely and 10 = very likely) for WSDOT's plan of operating up to two ETLs in each direction in addition to regular GPLs on I-5. • Supports converting the I-5 reversible express lanes into ETLs for improving speeds and reducing backups on the lanes through downtown. • Supports converting the I-5 reversible express lanes into ETLs for allowing the use any of the downtown exits • Supports converting the I-5 reversible express lanes into ETLs for moving more people and vehicles through the corridor. • Likely that they would have chosen to use ETLs for a faster trip the last time they traveled on I-5 when it was congested. • Saw themselves using ETLs at least once per month. • Were most willing to pay up to $4.00 (81.9%) to travel in the ETLs and increase their speed to 45 mph, as compared to the other clusters.

Cluster 1 – Low fans (32.1%; n = 193)	Cluster 2 – Medium fans (31.1%; n = 187)	Cluster 3 – Big fans (36.8%; n = 221)
• Find the statement "Toll rates will change by the amount of traffic congestion – higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion." to be very unappealing. • Find the statement "Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes." to be unappealing. • Find the statement "Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment." to be unappealing. • Find the statement "Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes." to be unappealing. • Find the statement "Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor." to be unappealing. • Find the statement "Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor." to be unappealing. • Find the statement "Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths." to be unappealing. • Find the statement "Changing from HOV to express toll lanes will make transit faster and more reliable." to be unappealing.	• Find the statement "Toll rates will change by the amount of traffic congestion – higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion." to be neither unappealing nor appealing. • Find the statement "Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes." to be neither unappealing nor appealing. • Find the statement "Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment." to be somewhat appealing. • Find the statement "Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes." to be neither unappealing nor appealing. • Find the statement "Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor." to be somewhat appealing. • Find the statement "Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths." to be appealing. • Find the statement "Changing from HOV to express toll lanes will make transit faster and more reliable." to be neither unappealing nor appealing.	• Find the statement "Toll rates will change by the amount of traffic congestion – higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion." to be appealing. • Find the statement "Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes." to be appealing. • Find the statement "Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment." to be appealing. • Find the statement "Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes." to be appealing. • Find the statement "Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor." to be appealing. • Find the statement "Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths." to be appealing. • Find the statement "Changing from HOV to express toll lanes will make transit faster and more reliable." to be appealing.

As the cluster names suggest, there are gradations of support for ETLs based on the importance they attach to benefits of ETLs, the level of support toward converting reversible express lanes on I-5 into ETLs, willingness to use ETLs for faster trip and willingness to pay to travel in the ETLs.

Based on these gradations (see table above), one may say that there is the need to customize outreach strategies based what segment one belongs to. Whereas the "low fans" may be a lost cause and the "big fans" may be relatively easy to approach, there may be a need for different outreach plans for the "medium fans". The "medium fans" may be won over by informing them of the benefits of ETLs.

What factors best predict if one will support express toll lanes on I-5?

Since the cross-tabulation analysis presented thus far only investigates the relationship between two variables at a time (without controlling for other variables or any interaction effects), logistical regression analysis was performed to more fully understand the relationship of support for ETLs with other variables.

It was found that the odds of someone supporting ETLs:

- Increased by 3.741 times if they saw themselves using ETLs at least once per month.
- Increased by 1.419 times for each increase in the level of appeal for the statement "Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths".
- Increased by 1.332 times for each increase in the level of appeal for the statement "Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes".
- Increased by 1.378 times for each increase in the level of support one had for converting the I-5 reversible express lanes into ETLs if doing so would meant improving speeds and reducing backups on the lanes through downtown.

These variables accounted for 61.9% of the variance in respondents' support for ETLs.[28] Based on these findings, one may say that willingness to use ETLs at least once per month, appeal for benefit statements regarding ETLs (for e.g., 'tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes', 'Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths', etc.), and supporting the conversion of reversible express lanes into ETLs to improve speeds and reduce backups on the lanes through downtown, play an important role in understanding and predicting support for ETLs.

28 Nagelkerke R2 = .619

Appendix A. Phone Survey Script

Hello, my name is _____ and I'm calling for the Washington State Department of Transportation to get opinions on issues regarding ways to reduce traffic congestion and improve travel in the Puget Sound region. This is not a sales call. It's an opportunity to express your opinions.

May I please speak with an adult 18 years of age or older in your household who travels on I-5 at least one day a week. Would that be you? (IF NO, ASK TO SPEAK WITH THE QUALIFIED PERSON AND REPEAT INTRO SECTION.

I'd like to ask you some questions on a strictly confidential basis. The questions will take no more than 12 minutes of your time.

I. Screener/Quota Questions

- Do you or does anyone in your household work for a transportation agency?
  - No
  - Yes (thank and terminate)
  - Don't know/refused (thank and terminate)
- In the last 7 days how many days did you travel on I-5 north of Seattle? (QUOTA = 300 WHO USE 1 OR MORE DAYS)
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7

- In the last 7 days how many days did you travel on I-5 south of Seattle? (QUOTA = 300 WHO USE 1 OR MORE DAYS)
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7

IF Q2, and Q3, ARE BOTH ZERO, THEN TERMINATE

- In the last 7 days how many days did you travel on I-5 through Seattle, where Seattle was not your destination?
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
- In the last 7 days how many days did you use each of the following ways to travel on I-5?

  Drove alone

  Carpooled with household members (ask how many people typically were in carpool)

  Carpooled with non-household members (ask how many were typically in carpool)

  Took the bus

  Vanpooled

  Other (specify)

- For each of the following types of lanes on I-5, and using a scale of 1-7 (where 1 is very low and 7 is very high) how would you rate the traffic congestion for your typical trip? (ROTATE and READ; 'Don't know' is acceptable. So is 'Not applicable'.)
  a. HOV lanes on I-5
  b. Regular general purpose lanes on I-5
  c. Reversible express lanes on I-5

OF THE 600 CASES, 180 NEED TO BE CARPOOLERS, BUS RIDERS, OR VANPOOLERS

II. Support for Express Toll Lanes

READ – Express toll lanes are free for carpools and buses, and are also open to solo drivers who choose to pay a toll for a faster, more reliable trip when they need it most. These are separate from existing general purpose traffic lanes replacing existing HOV lanes. Toll rates for solo drivers adjust with the level of congestion to ensure that traffic in the express toll lane is free flowing (at least 45 miles per hour) even when the regular lanes are congested. With express toll lanes you always have the choice to stay in the untolled general purpose lanes.

- WSDOT is considering operating up to two express toll lanes in each direction on I-5. These lanes would be in addition to existing general purpose traffic lanes. On a scale of 0-10, where 0= very low support and 10 = very high support, how much do you support this plan?
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - Don't know

- In thinking about the benefits of express toll lanes on I-5, please rate the following statements based on how appealing each statement is to you (where 1 is not appealing at all and 7 is very appealing). (Rotate and read.)
    a. Toll rates will change by the amount of traffic congestion – higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion.
    b. Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes.
    c. Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment.
    d. Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes.
    e. Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor.
    f. Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds. There would be no toll booths.
    g. Changing from HOV to express toll lanes will make transit faster and more reliable.
- On a scale of 1 to 7 (where 1 is strongly oppose and 7 is strongly support) how much would you oppose or support converting the I-5 reversible express lanes into express toll lanes if doing so would? ('Don't know' if acceptable answer.)
    a. Improve speeds and reduce backups on the lanes through downtown
    b. Allow you to use any of the downtown exits
    c. Move more people and vehicles through the corridor

Now I have some questions about how express toll lanes might work for you.

III. Likelihood to Use Express Toll Lanes

- Thinking about the last time you traveled on I-5 when it was congested,, how likely would you have been to choose to use express toll lanes for a faster trip? Please use a scale of 0-10, where 0= very unlikely and 10 = very likely.
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - Don't know
- We know that most people will not use the express tolled lanes for every trip or even for most trips. The purpose is to offer an option if you need it.
  - Do you see yourself using the express tolled lanes at least one time per month?
    - No
    - Yes
    - Don't know
  - Under what circumstances could you see yourself using the express toll lanes?
  - Overall, what are the top two things that you would want express toll lanes on I-5 to accomplish?
- Imagine that you are traveling alone in the general purpose lanes on I-5 and that traffic is stop-and-go. If you could travel in the express toll lane and increase your speed to 45 miles per hour how much of a toll would you be willing to pay for this trip?

- Currently, cars with 2 or more people can use the I-5 HOV lanes. HOV lanes on I-5 are currently over-used during peak commute times, slowing all vehicles in the lanes, including buses and carpools. To better use these lanes and make the new express toll lanes work more efficiently, would you support changing the definition of a high occupancy vehicle from 2 or more people to 3 or more people, so 1 or 2 person vehicles would pay the toll?
  - No
  - Yes
  - Don't know
- Recently new "smart highway" signs were turned on over each lane on I-5 south of downtown Seattle. Have you seen these signs in action?
  - No
  - Yes
  - Don't know/not sure

- Do you think these signs will improve traffic flow and safety?
  - No
  - Yes
  - Don't know

IV. Travel Behavior

- Do you have a Good To Go! toll transponder account?
  - No
  - Yes
- In the last 7 days, how many days did you use the reversible express lanes on I-5?
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7

- In the last 7 days, how many days did you use the HOV lanes on I-5?
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
- In the last week did you travel on I-5 on the weekend, during weekdays, or both?
  - Weekdays
  - Weekend days
  - Both weekdays and weekend days

ASK Q20 ONLY IF "WEEKDAYS OR "BOTH " ON Q19

- What time of the day did you travel on I-5 during weekdays in the last week? Would you say: (choose all that apply)
  - AM peak (5 am to 9 am)
  - Mid-day (after 9 am to before 3 pm)
  - PM peak (after 3 pm to 7 pm)
  - Evening (after 7 pm to 10pm)
  - Over night time (after 10 pm to before 5 am)

ASK Q21 ONLY IF "WEEKEND" OR "BOTH " ON Q19

- What time of the day did you travel on I-5 on the weekend in the last week? Would you say: (choose all that apply)
  - AM peak (5 am to 9 am)
  - Mid-day (after 9 am to before 3 pm)
  - PM peak (after 3 pm to 7 pm)
  - Evening (after 7 pm to 10pm)
  - Over night time (after 10 pm to before 5 am)

- For what trip purposes did you use I-5 in the last 7 days? Would you say: (multiple choices allowed; for each one chosen ask how many days used I-5 in last week for that purpose)
  - Travel to or from work (if chosen, get work zip code and city; also ask if pay for parking)
  - Travel to or from school (if chosen, get name of school; also ask if pay for parking)
  - Errands/shopping
  - Non-commute work-related travel
  - Recreational activities
  - Visit family or friends
  - Medical needs
  - Other (specify)
  - Don't know (do not read)

Ask Q23 only if indicated "work travel on Q22

- What is the approximate one-way distance in miles between your home and your work location? (do not read)
  - 0-5
  - 6-10
  - 11-15
  - 16-20
  - 21-25
  - 26-30
  - 31-35
  - 36-40
  - 41-45
  - 46-50
  - 51 or more
  - don't know /refused

V. Demographics

We have a few questions about you and your household. Your answers will be strictly confidential and will be combined with those of other respondents for statistical analysis purposes.

- What is your home zip code?

- Which of the following broad ranges includes your age?
  - 18-24
  - 25-34
  - 35-44
  - 45-54
  - 55-64
  - 65 and older
  - Refused
- Which of the following best describes your work situation? Would you say: (multiple responses allowed)
  - Employed full-time
  - Employed part-time
  - Student full-time
  - Student part-time
  - Homemaker
  - Retired
  - Unemployed
  - Refused
- Which of the following income categories applies to your household's total annual income (before taxes) for 2009?
  - Under $20,000
  - $20,000 to less than $30,000
  - $30,000 to less than $55,000
  - $55,000 to less than $75,000
  - $75,000 to less than 90,000
  - $90,000 to less than $125,000
  - $125,000 to less than $150,000
  - $150,000 and above
  - Refused

- Which of the following best describes your ethnic/racial background? Would you say:
  - White/Caucasian (not Hispanic/Latino background)
  - White Caucasian (Hispanic/Latino background)
  - Black/African American
  - Asian/Pacific Islander
  - Hispanic/Latino
  - Native American
  - Multi-racial
  - Other (specify)
  - Refused
- Would you be willing to participate in a discussion group or other further research efforts to help the Department of Transportation learn more about opinions of citizens like you regarding express toll lanes?
  - No (skip to Q31)
  - Yes (get contact info)
  - Don't know/refused (skip to Q31)
- Could I have your name, phone number and email address.
  - Name: _____
  - Phone: _____
  - Email address: _____
- Gender: (interviewer enter)
  - Male
  - Female

Those are all the questions I have for you. Thank you very much for your participation

Appendix B. Topline Results

Q2. In the last 7 days, how many days did you travel on I-5 north of Seattle?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	106	17.6	17.6	17.6
	1	105	17.5	17.5	35.1
	2	112	18.6	18.6	53.7
	3	65	10.8	10.8	64.6
	4	55	9.2	9.2	73.7
	5	95	15.8	15.8	89.5
	6	25	4.2	4.2	93.7
	7	38	6.3	6.3	100.0
	Total	601	100.0	100.0	

Q3. In the last 7 days, how many days did you travel on I-5 south of Seattle?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	152	25.3	25.3	25.3
	1	108	18.0	18.0	43.3
	2	105	17.5	17.5	60.7
	3	69	11.5	11.5	72.2
	4	38	6.3	6.3	78.5
	5	65	10.8	10.8	89.4
	6	28	4.7	4.7	94.0
	7	36	6.0	6.0	100.0
	Total	601	100.0	100.0	

Q4. In the last 7 days, how many days did you travel on I-5 through Seattle, where Seattle was not your destination?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	318	52.9	52.9	52.9
	1	102	17.0	17.0	69.9
	2	74	12.3	12.3	82.2
	3	32	5.3	5.3	87.5
	4	24	4.0	4.0	91.5
	5	29	4.8	4.8	96.3
	6	11	1.8	1.8	98.2
	7	11	1.8	1.8	100.0
	Total	601	100.0	100.0	

Q5. In the last 7 days how many days did you use each of the following ways to travel or I-5?

		Drive alone	Carpool with household members	Carpool with non-household members	Take the bus	Vanpool
0	Count	152	274	499	534	592
	%	25.3%	45.6%	83.0%	88.9%	98.5%
1	Count	91	113	45	23	4
	%	15.1%	18.8%	7.5%	3.8%	.7%
2	Count	91	103	22	12	
	%	15.1%	17.1%	3.7%	2.0%	
3	Count	61	42	16	6	1
	%	10.1%	7.0%	2.7%	1.0%	.2%
4	Count	46	30	8	6	
	%	7.7%	5.0%	1.3%	1.0%	
5	Count	94	28	9	18	4
	%	15.6%	4.7%	1.5%	3.0%	.7%
6	Count	25	4	1		
	%	4.2%	.7%	.2%		
7	Count	41	7	1	2	
	%	6.8%	1.2%	.2%	.3%	
Total	Count	601	601	601	601	601
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Q5a. How many were typically in carpool?

		Carpool with household members	Carpool with non-household members
2	Count	218	36
	%	66.7%	66.7%
3	Count	69	13
	%	21.1%	24.1%
4	Count	31	2
	%	9.5%	3.7%
5	Count	7	1
	%	2.1%	1.9%
6 or above	Count	2	2
	%	.6%	3.7%
Total	Count	327	54
	%	100.0%	100.0%

Q6. For each of the following types of lanes on I-5, and using a scale of 1-7 (where 1 is very low and 7 is very high) how would you rate the traffic congestion for your typical trip?

		HOV lanes on I-5	Regular general purpose lanes on I-5	Reversible express lanes on I-5
Very low congestion	Count	50	22	53
	%	9.4%	3.7%	11.2%
2	Count	95	33	71
	%	17.8%	5.5%	14.9%
3	Count	105	71	77
	%	19.7%	11.9%	16.2%
4	Count	88	91	82
	%	16.5%	15.2%	17.3%
5	Count	92	154	62
	%	17.2%	25.8%	13.1%
6	Count	38	122	26
	%	7.1%	20.4%	5.5%
Very high congestion	Count	33	102	39
	%	6.2%	17.1%	8.2%
Don't know	Count	33	3	65
	%	6.2%	.5%	13.7%
Total	Count	534	598	475
	%	100.0%	100.0%	100.0%

Q7. WSDOT is considering operating up to two express toll lanes in each direction on I-5. These lanes would be in addition to existing general purpose traffic lanes. On a scale of 0-10, where 0= very low support and 10 = very high support, how much do you support this plan?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very low support	177	29.5	29.5	29.5
	1	35	5.8	5.8	35.3
	2	47	7.8	7.8	43.1
	3	26	4.3	4.3	47.4
	4	26	4.3	4.3	51.7
	5	55	9.2	9.2	60.9
	6	29	4.8	4.8	65.7
	7	50	8.3	8.3	74.0
	8	54	9.0	9.0	83.0
	9	15	2.5	2.5	85.5
	Very high support	78	13.0	13.0	98.5
	Don't know	9	1.5	1.5	100.0
	Total	601	100.0	100.0	

Q8. In thinking about the benefits of express toll lanes on I-5, please rate the following statements based on how appealing each statement is to you (where 1 is not appealing at all and 7 is very appealing).

		Toll rates will change by the amount of traffic congestion - higher rates during times of more congestion, lower rates during times of less congestion. This will help avoid over-crowding the lanes and will reduce congestion.	Tolling will help guarantee travel speeds of at least 45 mph, providing a more reliable trip to those who use the express toll lanes	Tolling is expected to reduce the amount of time vehicles are idling in stop and go traffic, which will be good for the environment	Moving vehicles out of the general purpose lanes and into express toll lanes will increase speeds in all lanes	Tolling funds could go directly into a dedicated account to maintain and improve the I-5 travel corridor	Express toll lanes would collect tolls electronically as vehicles travel at regular highway speeds	Changing from HOV to express toll lanes will make transit faster and more reliable
Not appealing at all	Count	172	146	133	147	144	118	170
	%	28.6%	24.3%	22.1%	24.5%	24.0%	19.6%	28.3%
2	Count	44	55	51	50	33	33	55
	%	7.3%	9.2%	8.5%	8.3%	5.5%	5.5%	9.2%
3	Count	45	48	51	49	31	29	60
	%	7.5%	8.0%	8.5%	8.2%	5.2%	4.8%	10.0%
4	Count	47	57	46	64	34	27	51
	%	7.8%	9.5%	7.7%	10.6%	5.7%	4.5%	8.5%
5	Count	116	92	73	97	82	70	92
	%	19.3%	15.3%	12.1%	16.1%	13.6%	11.6%	15.3%
6	Count	58	61	69	59	65	64	59
	%	9.7%	10.1%	11.5%	9.8%	10.8%	10.6%	9.8%
Very appealing	Count	115	137	173	129	205	250	102
	%	19.1%	22.8%	28.8%	21.5%	34.1%	41.6%	17.0%
Don't know	Count	4	5	5	6	7	10	12
	%	.7%	.8%	.8%	1.0%	1.2%	1.7%	2.0%
Total	Count	601	601	601	601	601	601	601
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q9. On a scale of 1 to 7 (where 1 is strongly oppose and 7 is strongly support) how much would you oppose or support converting the I-5 reversible express lanes into express tol lanes if doing so would?

		Improve speeds and reduce backups on the lanes through downtown	Allow you to use any of the downtown exits	Move more people and vehicles through the corridor
Strongly oppose	Count	182	149	150
	%	30.3%	24.8%	25.0%
2	Count	44	39	27
	%	7.3%	6.5%	4.5%
3	Count	51	55	45
	%	8.5%	9.2%	7.5%
4	Count	56	47	54
	%	9.3%	7.8%	9.0%
5	Count	84	81	82
	%	14.0%	13.5%	13.6%
6	Count	46	47	77
	%	7.7%	7.8%	12.8%
Strongly support	Count	129	166	149
	%	21.5%	27.6%	24.8%
Don't know	Count	9	17	17
	%	1.5%	2.8%	2.8%
Total	Count	601	601	601
	%	100.0%	100.0%	100.0%

Q10. Thinking about the last time you traveled on I-5 when it was congested, how likely would you have been to choose to use express toll lanes for a faster trip?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very unlikely	174	29.0	29.0	29.0
	1	37	6.2	6.2	35.1
	2	34	5.7	5.7	40.8
	3	32	5.3	5.3	46.1
	4	29	4.8	4.8	50.9
	5	68	11.3	11.3	62.2
	6	28	4.7	4.7	66.9
	7	38	6.3	6.3	73.2
	8	48	8.0	8.0	81.2
	9	15	2.5	2.5	83.7
	Very likely	90	15.0	15.0	98.7
	Don't know	8	1.3	1.3	100.0
	Total	601	100.0	100.0	

Q11a. We know that most people will not use the express tolled lanes for every trip or even for most trips. The purpose is to offer an option if you need it. Do you see yourself using the express tolled lanes at least one time per month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	282	46.9	46.9	46.9
	Yes	303	50.4	50.4	97.3
	Don't know	16	2.7	2.7	100.0
	Total	601	100.0	100.0	

Q11b. Under what circumstances could you see yourself using the express toll lanes? (Multiple responses allowed; Percent add up to more than 100%)

		Count	Column %
Under what circumstances could you see youself using the ETL	All the time/use it daily/daily commute	13	2.2
	Bad traffic/congestion/traffic/rush hour/peak hours	139	23.2
	A car accident/roads blocked/unable to drive on other roads	16	2.7
	Carpooling/driving with others	14	2.3
	Road trips/traveling far/going a long distance	23	3.8
	In bad weather	2	.3
	Saves time/doesn't take as long/in a hurry/in a rush	92	15.4
	Make an appointment/keep an appointment	84	14.0
	Running late/running late for work	78	13.0
	Emergency/desperation	89	14.9
	Medical emergency/health emergency/in an ambulance	33	5.5
	Airport/driving to the airport	33	5.5
	Downtown/trying to get to downtown/when going downtown	22	3.7
	Sport's arena/going to a sports game	8	1.3
	Visiting friends/to see family	7	1.2
	Entertainment/pleasure/a night out/on the weekend	20	3.3
	Business/for business use/business trips/for work	26	4.3
	Coming home from an appointment	2	.3
	Free/if there were no tolls	14	2.3
	Company paid/if the company I worked for paid for it	4	.7
	If it isn't too expensive/depends on the cost	9	1.5
	Forced to use it/only if I was made to use the toll road	8	1.3
	Other	25	4.2
	None/nothing/wouldn't use a toll lane	72	12.0
	Don't know	2	.3
Total		599	100.0

Q11c. What are the top two things that you would want express toll lanes on I-5 to accomplish? (Multiple responses allowed; Percent add up to more than 100%)

		Count	Column %
What are the top two things that you would want ETLs on I5	Easy travel/more convenient/easier driving (non-specific)	18	3.0
	Carpool use/increase carpooling/encourage carpooling	11	1.8
	Flow of traffic/keep traffic flowing	148	24.8
	Less traffic/less congestion/get rid of gridlock	235	39.4
	Speed of traffic/get me home faster	174	29.1
	Free/not cost anything	9	1.5
	Raise money/make money/raise tax revenue	35	5.9
	Lower the price/make it cheaper/reasonable price	14	2.3
	Better roads/improve roads/help with road conditions	24	4.0
	More lanes/more carpool lanes/expand/create more lanes	18	3.0
	Safety/reduce accidents/make the roads safer	24	4.0
	Reduce pollution/help out the environment/reduce emissions	29	4.9
	Get people to use more public transportation	6	1.0
	Other	19	3.2
	None/nothing/want toll roads to go away	94	15.7
	Don't know	10	1.7
Total		597	100.0

Q12. If you could travel in the express toll lane and increase your speed to 45 miles per hour how much of a toll would you be willing to pay for this trip?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nothing	161	26.8	26.8	26.8
	Up to $1.00	230	38.3	38.3	65.1
	$1.01 - $2.00	107	17.8	17.8	82.9
	$2.01 - $3.00	48	8.0	8.0	90.8
	$3.01 - $4.00	8	1.3	1.3	92.2
	$4.01 - $5.00	30	5.0	5.0	97.2
	$5.01 - $10.00	17	2.8	2.8	100.0
	Total	601	100.0	100.0	

Q13. To better use these lanes and make the new express toll lanes work more efficiently, would you support changing the definition of a high occupancy vehicle from 2 or more people to 3 or more people, so 1 or 2 person vehicles would pay the toll?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	388	64.6	64.6	64.6
	Yes	200	33.3	33.3	97.8
	Don't know	13	2.2	2.2	100.0
	Total	601	100.0	100.0	

Q14. Recently new 'smart highway' signs were turned on over each lane on I-5 south of downtown Seattle. Have you seen these signs in action?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	230	38.3	38.3	38.3
	Yes	361	60.1	60.1	98.3
	Don't know	10	1.7	1.7	100.0
	Total	601	100.0	100.0	

Q15. Do you think these signs will improve traffic flow and safety?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	179	29.8	29.8	29.8
	Yes	282	46.9	46.9	76.7
	Don't know	140	23.3	23.3	100.0
	Total	601	100.0	100.0	

Q16. Do you have a Good To Go! toll transponder account?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	569	94.7	94.7	94.7
	Yes	32	5.3	5.3	100.0
	Total	601	100.0	100.0	

Q17-18. In the last 7 days, how many days did you use the following on I-5?

	Reversible express lanes		HOV lanes	
	Count	%	Count	%
0	368	61.2%	242	40.3%
1	85	14.1%	112	18.6%
2	63	10.5%	86	14.3%
3	30	5.0%	67	11.1%
4	15	2.5%	27	4.5%
5	33	5.5%	53	8.8%
6	4	.7%	7	1.2%
7	3	.5%	7	1.2%
Total	601	100.0%	601	100.0%

Q19. In the last week did you travel on I-5 on the weekend, during weekdays, or both?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Weekdays	168	28.0	28.0	28.0
	Weekend days	34	5.7	5.7	33.6
	Both weekdays and weekend days	399	66.4	66.4	100.0
	Total	601	100.0	100.0	

Q20. What time of the day did you travel on I-5 during weekdays in the last week? (Multiple responses allowed; Percent add up to more than 100%)

		Count	Column %
	AM peak (5 am to 9 am)	288	50.8
	Mid-day (after 9 am to before 3 pm)	330	58.2
	PM peak (after 3 pm to 7 pm)	330	58.2
	Evening (after 7 pm to 10pm)	149	26.3
	Over night time (after 10 pm to before 5 am)	54	9.5
Total		567	100.0

Q21. What time of the day did you travel on I-5 during weekends in the last week? (Multiple responses allowed; Percent add up to more than 100%)

		Count	Column %
	AM peak (5 am to 9 am)	122	28.2
	Mid-day (after 9 am to before 3 pm)	303	70.0
	PM peak (after 3 pm to 7 pm)	200	46.2
	Evening (after 7 pm to 10pm)	124	28.6
	Over night time (after 10 pm to before 5 am)	41	9.5
Total		433	100.0

Q22. For what trip purposes did you use I-5 in the last 7 days? (Multiple responses allowed; Percent add up to more than 100%)

		Count	Column %
	Travel to or from work	291	48.4
	Travel to or from school	34	5.7
	Errands/shopping	280	46.6
	Non-commute work-related travel	218	36.3
	Recreational activities	307	51.1
	Visit family or friends	275	45.8
	Medical needs	119	19.8
	Other	26	4.3
	Don't know	2	.3
Total		601	100.0

Q23. What is the approximate one-way distance in miles between your home and your work location?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 5 miles	40	6.7	13.8	13.8
	6 - 10	58	9.7	20.0	33.8
	11 - 15	66	11.0	22.8	56.6
	16 - 20	57	9.5	19.7	76.2
	21 - 25	23	3.8	7.9	84.1
	26 - 30	17	2.8	5.9	90.0
	31 - 35	12	2.0	4.1	94.1
	36 - 40	2	.3	.7	94.8
	41 - 45	2	.3	.7	95.5
	46 - 50	1	.2	.3	95.9
	51 or more	5	.8	1.7	97.6
	Don't know / Refused	7	1.2	2.4	100.0
	Total	290	48.3	100.0	
Missing	System	311	51.7		
Total		601	100.0		

Q25. Which of the following broad ranges includes your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 24	22	3.7	3.7	3.7
	25 - 34	37	6.2	6.2	9.8
	35 - 44	123	20.5	20.5	30.3
	45 - 54	149	24.8	24.8	55.1
	55 - 64	150	25.0	25.0	80.0
	65 and older	110	18.3	18.3	98.3
	Refused	10	1.7	1.7	100.0
	Total	601	100.0	100.0	

Q26. Which of the following best describes your work situation? (Multiple responses allowed; Percent add up to more than 100%)

		Count	Column %
	Employed full-time	340	56.6
	Employed part-time	85	14.1
	Student full-time	22	3.7
	Student part-time	17	2.8
	Homemaker	42	7.0
	Retired	123	20.5
	Unemployed	37	6.2
	Refused	5	.8
Total		601	100.0

Q27. Which of the following income categories applies to your household's total annual income (before taxes) for 2009?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under $20,000	23	3.8	3.8	3.8
	$20,000 to less than $30,000	39	6.5	6.5	10.3
	$30,000 to less than $55,000	99	16.5	16.5	26.8
	$55,000 to less than $75,000	81	13.5	13.5	40.3
	$75,000 to less than $90,000	73	12.1	12.1	52.4
	$90,000 to less than $125,000	94	15.6	15.6	68.1
	$125,000 to less than $150,000	37	6.2	6.2	74.2
	$150,000 and above	75	12.5	12.5	86.7
	Refused	80	13.3	13.3	100.0
	Total	601	100.0	100.0	

Q28. Which of the following best describes your ethnic / racial background?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White / Caucasian (not Hispanic / Latino background)	462	76.9	76.9	76.9
	White / Caucasian (Hispanic / Latino background)	11	1.8	1.8	78.7
	Black / African American	19	3.2	3.2	81.9
	Asian / Pacific Islander	38	6.3	6.3	88.2
	Hispanic / Latino	13	2.2	2.2	90.3
	Native American	6	1.0	1.0	91.3
	Multi-racial	19	3.2	3.2	94.5
	Other	6	1.0	1.0	95.5
	Refused	27	4.5	4.5	100.0
	Total	601	100.0	100.0	

Q31. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	298	49.6	49.6	49.6
	Female	303	50.4	50.4	100.0
	Total	601	100.0	100.0	

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